



**Top:** photo by Bill Lea. **Above:** photo by David Coffman, Virginia Department of Forestry (VDOF).

# A Gift That End

by Irv Kenyon

(Revised and abridged from December, 1991 **Virginia Wildlife**) e've all received those kinds of gifts for Christmas; those given with good intentions and best wishes that just don't endure or exactly touch the heart. Some either break, fall apart, or get stepped on. Gifts that do endure,

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### ures

on the other hand, are sometimes those of our own choosing, made possible by our own labor, and rewarding us with the lasting satisfaction of a job well done.

Owners of forestland looking for something really special this year

might like to treat themselves to the ideas contained in a creative forest management package, called the Forest Stewardship Program. Wrapped in the concept of Aldo Leopold's land ethic, Forest Stewardship will appeal to those landowners who would like to apply sound management to all their natural resources, but would also enjoy deciding which of these receives the greatest attention. Forest Stewardship takes the approach to natural resources that one would the arrival of a litter of puppies; it's alright to pick a favorite or two, but none can be neglected.

Individually packaged within this program are items to interest almost every woodland owner. There's timber production, wildlife habitat improvement, conservation of soil and water quality, outdoor recreation, and the protection of unique natural or historical environments. Each of these comes complete with instructions, in the form of technical assistance from natural resource managers to help you achieve satisfying results. Not even L. L. Bean's Christmas catalog can offer anything this

grand.

The Virginia Department of Forestry (VDOF) reports that over 75 percent of the state's forestland—11 million acres—is individually owned, placing this vast amount of the state's timber and associated resources in the hands of over 300,000 individual landowners. However, most of these owners have no management plans. Many have not given this any consideration, nor have they any idea of how or where to start. Many do not realize that help is available-free. Others assume that their forests are doing well, without even bothering to look, not realizing that neglect can result in serious consequences. Still others, those not interested in harvesting their timber, may fear that a forest management plan is the preamble to a logging contract.

Land entered in the Forest Stewardship Program, however, will receive deserved attention, a management plan, and landowners can feel confident that their personal values need not be compromised. Properly managed, the aesthetic, recreational, and economic values found in Virginia's woodlands are gifts to be enjoyed by current landowners and passed on to future generations.

To be eligible for the Stewardship Program, you must own 20 acres or more of forested land. The definition of "forested" is pretty broad, so don't despair if you don't have 20 acres of prime hardwoods or similar acreage in tall, whispering pines. A few Christmas trees would be appropriate, but not required. Even open land, if plans are to begin forestation, will help you qualify.

A companion program to Forest Stewardship is the Stewardship Incentive Program (SIP). The purpose of SIP is to provide the incentive to implement approved practices by paying the landowner (even Ebenezer Scrooge would have liked this) for

part of the cost.

Landowners entering the Stewardship Program are required to sign a nonbinding pledge to uphold the Stewardship concepts. The signed pledge serves as evidence that the landowners intentions are sincere and that he or she is ready to have the forester and other resource managers proceed.

The "star on top of the tree" for Forest Stewardship Program participants is Forest Stewardship Certification. If Stewardship requirements have been adequately followed, the landowner will be nominated for certification. Certification gives landowners some well deserved

"bragging rights."

Properly received and carefully kept, the gift of Forest Stewardship won't break or fall apart. It is guaranteed to be stepped on only as a source of pride. For those who value their land, and work to improve its resources, this gift will become a favorite. The Forest Stewardship Program offers long standing rewards in satisfaction—a gift that endures.

Merry Christmas. □

Irv Kenyon is a special projects wildlife biologist with VDGIF.

### Stewards of the Land

A special edition devoted to the people caring for our forests and the life within them.





#### Virginia's Forest Stewardship Program

Administered by the Virginia Department of Forestry in cooperation with:

- Department of Game and Inland Fisheries
- Department of Conservation and Recreation
- Department of Historic Resources
- · State Water Control Board
- College of Forestry and Wildlife Resources, Virginia Tech
- George Washington National Forest
- · Jefferson National Forest
- Virginia Association of Soil & Water Conservation Districts
- · Virginia Forestry Association
- Virginia State University -Cooperative Extension
- USDA Agricultural Stabilization and Conservation Service
- USDA Soil Conservation Service
- Chesapeake Bay Foundation
- Association of Consulting Foresters
- Conservation Organizations
- Local Government

his special edition of Virginia Wildlife features professional articles and interviews with forest landowners who have practiced forest stewardship. The articles are meant to educate and inform both landowners and anyone interested in true conservation—the wise use of our bountiful natural resources. These outstanding Forest Stewards share their problems, experiences and successes with you. In addition to these real life experiences, are stories by natural resource management professionals which present the facts and explain some of the myths and misconceptions surrounding often complex forest and wildlife management practices.

There is an old saying that "in nature, the only thing constant is change." The forest and people in Virginia are changing. Not only are there physical changes (more people, less forestland), but attitudes, values and concerns for the future are also changing. All of this changes the way we must manage our renewable resources. The way Grandpa did it or how he taught you to do it decades ago may not be true or relevant today. In this time of growing environmental awareness, we hope the information throughout this issue will begin to answer some of your questions or concerns about the complex issues involving forestry and wildlife management. We encourage your participation with us in the conservation of our natural resources.

Bnd Bristow Director, Virginia Department of Game and Inland Fisheries

he term "Stewardship" means many things to many people. That's why it is so appropriate to call our new approach to resource management "Forest Stewardship." Our forest resource means so many things to so many people. The program and philosophy is not single focused. Forest Stewardship is the implementation of a plan for nurturing these interrelated resources. Forest Stewardship recognizes that we do not have to have forest products at the expense of wildlife, clean water, recreation, or endangered species. Forest Stewardship does not mean we must "lock up" our forests, thinking (or hoping) they will stay in their present state forever. Forest Stewardship means a high level of concern for all the resources that abound in our woodlands. It seems we understand the necessity of holistic management, so that so many can have so much.

We should be proud of our two year beginning in Virginia. In a short period, more than 400 landowners have had management plans prepared and are actively carrying out conservation practices to reach their objectives for their woodlands. Over 80 forest landowners have been certified as Stewards of the Forest. They have dedicated themselves and their land to a better environment and ecological integrity as well as our economic well-being. These landowners should be saluted for their unselfishness and their vision of a better 21st century.

James W. Garner State Forester of Virginia

Front Cover: Raccoon; photo by Bill Lea.

Back Cover: Wood duck box on tree in winter; photo by Rob Simpson.



photo by Robbie May, VDOF

#### Virginia's Stewards of the Forest

by David Coffman

Porestland in Virginia is disappearing at an alarming rate. Recent surveys have shown that more than 20,000 acres of forest land are lost each year. This is not from the cutting of trees for forest products such as lumber, paper, or firewood—but rather the conversion of forestland to house sites, shopping centers, roads and other development purposes.

More than 75% of our remaining forestland is owned privately—by an estimated 300,000 individuals. Land ownership is one of the most valued rights of American citizens; however, ownership also carries with it the responsibility of good stewardship. How these private landowners manage their forests today will determine the future of forests—and wildlife—in Virginia tomorrow.

In recent years there has been a dramatic change in ownership patterns, landowners' objectives and attitudes. Many new owners are from urban areas and not familiar with services offered by conservation agencies or are reluctant to "manage" resources for fear of harming the environment. Many forest landowners do not have a forest management plan prior to harvesting their timber, nor

do they seek any technical advice.

To improve the management of private forestlands, the Virginia Department of Forestry (VDOF) has developed a Forest Stewardship Program in cooperation with other natural resource conservation agencies, consulting foresters, forest industry, and woodland owners' associations. This state program is part of a nationwide effort developed in 1990 by the National Association of State Foresters in cooperation with the USDA Forest Service.

The Forest Stewardship Program is aimed at landowners with 20 or more acres of forestland, and provides free technical assistance and financial support to help them manage their lands for wildlife habitat, timber production, recreational opportunities, natural heritage and historic resources.

It is hoped that this magazine will spark your interest in protecting, preserving, and wisely using the many resources found in the forests. Conservation professionals are eager to assist you in understanding some of the complexities surrounding natural resource management. We hope that you who are fortunate enough to own land will become more thoughtful

about your land use plans and practice forest stewardship.

Most of all, we hope that after reading this magazine and hearing the thoughts of biologists, foresters, and landowners, you will realize that a forest is not just a "forest," and that the responsibility for what happens to it in the future lies with you—today.

David Coffman is the Forest Stewardship Program Coordinator for the Virginia Department of Forestry in Charlottesville.

A special comprehensive study of Virginia forest landowners, attitudes and objectives was conducted for the Virginia Department of Forestry in 1991 by Sandra Hodge, a natural resource management consultant in Charlottesville.

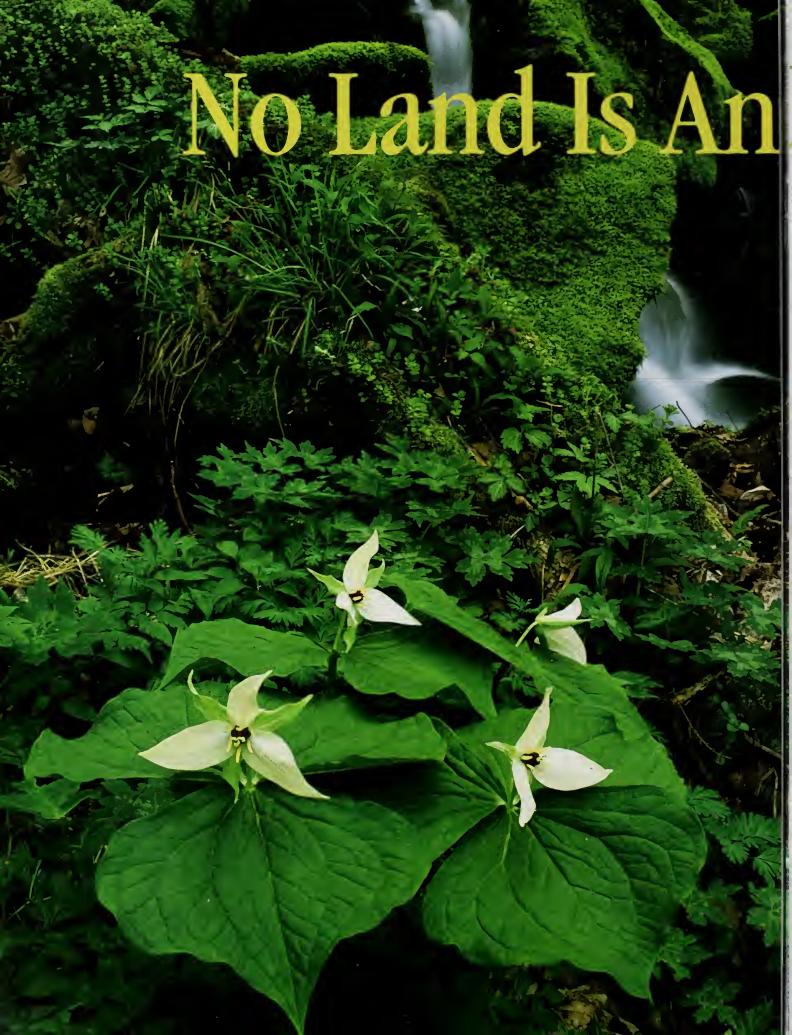
The results are as follows:

- · 80% of those responding owned 250 acres or less
- Husband and wife is the most common form of ownership, followed by sole ownership
- Approximately 50% of the land surveyed is owned by those 61 and older
- Three top reasons cited as "important" for owning forested land are non-economic:

Preserving nature Maintaining scenic beauty Viewing wildlife

- 55% have harvested timber
- Primary reason given for harvesting: they thought the timber was mature
- 52-59% of the selection decisions for the trees to be harvested were made by landowners and commercial loggers without professional forestry assistance
- 46% have never sought professional forestry assistance— Why?

Never thought about it Did not know it was available Did not know who to contact



# Island

#### By Karen Terwilliger

 ↑ he Forest Stewardship program is the most comprehensive forestry program to date. It is a chance to look beyond the timber value of each tree to the overall value of the forest itself; to see the for-

est through the trees.

The chief benefit of this program is that it allows landowners to blend many of their goals and objectives into one plan with the help of natural resource professionals from all disciplines. But to me, the most intriguing and challenging aspect of the program is the opportunity to cross artificial land ownership boundary lines and view forests as part of the broader landscape of Virginia.

Forests are part of the "fabric" of our landscape. Taking a bird's eye view of each region (or physiographic province), for example, offers unique forestry management opportunities. The Coastal Plain, with its extensive wetlands, is critical to water quality. Providing for forested wetland buffers is not only sound environmental control and water quality assurance, but also provides critical habitat and travel corridors for wildlife. These coastal forests play a vital role in bird migration along the Atlantic Flyway. They provide our long distance flyers needed places to rest and feed along their intercontinental journey. As a mid-Atlantic state along this major pathway for bird migration, Virginia's forests provide wildlife habitat important to many songbird and raptor species during each season of the year.

Riparian management which goes beyond BMPs and allows for the widest buffers possible along streams and rivers provides good breeding habitat for bottomland hardwood bird species, mammals, and reptiles and amphibians. For example, the Northwest River and North Landing River systems are critical to many rare and endangered species such as the big-eared bat, canebrake rattlesnake, Dismal swamp shrew, and several plant species which have evolved within the coastal wetland system and the Great Dismal Swamp. However, there is only one Great Dismal Swamp in the world, and our Atlantic white cedar, pond pine, pine barrens, forests, and old growth loblolly stands are scarce. Large, mature hardwood forest areas are also rarer than they have been in Virginia's history.

The more we can create and maintain these declining habitats in our coastal landscape, the better able we will be to meet the wildlife, soil, water, recreation, and aesthetic objectives of the broader coastal perspective. Landowners can be presented with the concept that their "little piece" is a major contributor to a larger forest diversity for the Coastal Plain and its important role along the Atlantic Flyway.

The same is true for the Piedmont, where the landscape begs for the added diversity component of large hardwood tracts, wider riparian zones, and wider wildlife corridors. Granted, most of the landowners (and therefore Stewardship Plans) will deal with making the best out of

loblolly pine management; but whenever a chance exists to encourage or manage the rare habitats, the landowners should be made aware of this opportunity to enhance wildlife diversity, soil, water, recreation, and aesthetics.

Forest management in the mountains can also provide forested migration corridors for neotropical birds as well as general wildlife diversity. Many unique habitats, such as caves, karst areas and freshwater streams, exist where the management of riparian

zones to protect the rare species in these habitats could be coordinated between landowners along the stream watersheds. The scarce spruce, fir, and hemlock stands support rare plant and animal communities found nowhere else in the state, such as the Northern flying squirrel, Appalachian water shrew, and rock

In summary, it is important to understand the concept of providing forest and wildlife diversity not only on your own property, but also on the larger landscape level. Most often you will find that both can be accomplished at the same time. Knowing that your forest management has significance at the local level as well as on a larger natural resource scale, is part of the reward of participating in the Forest Stewardship Program.

Picture how your wooded "patch" fits into Virginia's forested quilt. Ask that critical question, "What do I have on my property that is special and should be maintained for the diversity of our landscape and our rare plant and animal communities?" Thinking beyond boundaries, I believe, is the beginning of true land stewardship.

Karen Terwilliger is a VDGIF wildlife biologist supervisor in charge of Virginia's Nongame and Endangered Species Program.



Forest stewardship involves thinking beyond the boundaries of your own land. It includes leaving riparian areas (those lands adjacent to streams and rivers) forested, which protects water quality downstream and provides critical habitat and travel corridors for wildlife and plant species. Opposite page: White erect trillium; photo by Bill Lea. Above: Craig's Creek; photo by Dwight Dyke.

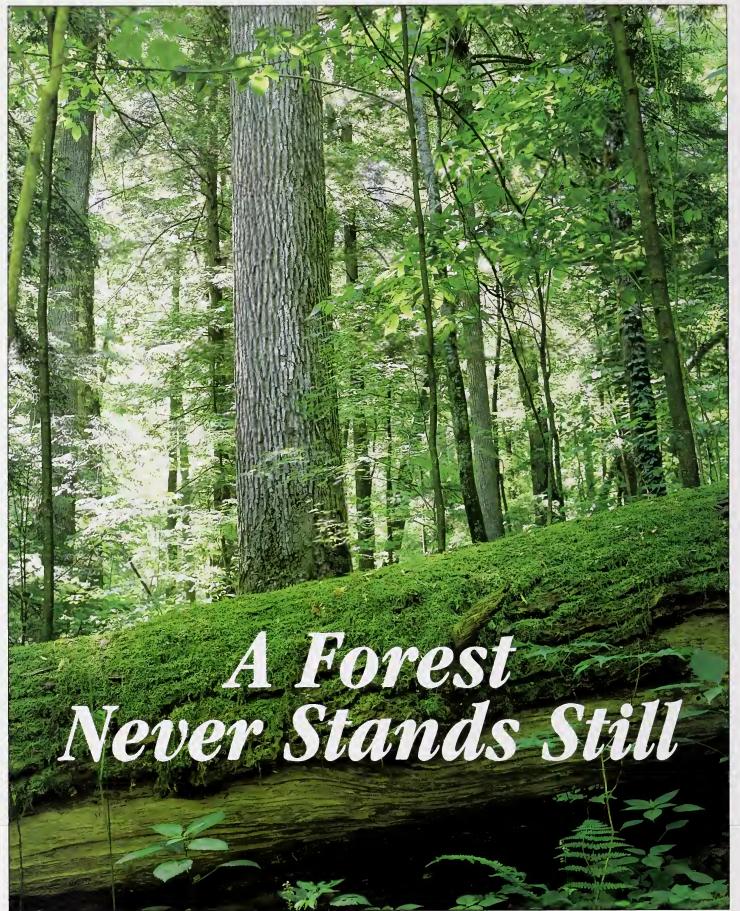


photo by Dwight Dyke

#### by Irv Kenyon

ddressing a group of landowners a while back, I was trying to impress upon them how the change in the composition of plants over time had a major impact on the wildlife present. One gentleman, citing the recent disappearance of quail from his property that had been cut-over and reforested a few years earlier, took exception. "I've done nothing," he said. "Nothing has changed."



After harvesting, increased sunlight triggers hardwood species to regenerate naturally by stump sprouts and by seeds that may have been lying dormant on the forest floor for years; photo by Dwight Dyke.

Not likely. Change within a forest, sometimes swift, sometimes centipede slow, is as fundamental as fur on a fox. Too, more than trees alone, a forest is a community of plants, of wildlife, soils, and water. As change occurs to any of these, it will touch each one of the others. Intervention by man or nature may speed, slow, or otherwise alter the process, but change is certain.

The greatest natural changes in a forest occur as a result of age. Not unlike our own lives, or those we observe around us, forest change is at first rapid and vigorous, slowing as it reaches middle age, and finally reaching maturity where further change may only be noticed by its loss of vitality or other problems that accompany old age. Also, natural or accidental events, often unwelcome,

can step in to interrupt the normal aging process.

That aging, thus change, is a natural occurrence, raises the question of man's intervention. Some preservationists would argue that it is better to allow the natural aging process to take its course, a choice that is to be respected. Yet, with much of Virginia's forestland being claimed by subdivisions and shopping malls, it seems we can ill afford this approach

Recognizing and influencing the natural course of events in a forest is the essence of responsible forest management.

on a very large scale. Too, the economic importance of this state's forest industry and the wholesale demand for forest products cannot be denied. By our own growing population, we place greater demands on remaining forest lands and the resources they provide.

Current forest management, therefore, stresses not only the timely utilization of forest products, but also

the welfare of other forest community members. Providing benefits for wildlife, and protecting forestland soils, water quality, and other desirable plants receive attention as well. Thus, dealing with change—recognizing and influencing the natural course of events in a forest—is the essence of responsible forest management.

Most difficult for some people, however, is dealing with the change that timber harvest brings. Yet, perhaps with rare exception, there is probably no forestland in Virginia that has not been subjected to cutting at one time or another, either to provide wood products or to clear the land for earlier, but later abandoned agricultural efforts.

Dealing with change can be far easier if the outcome and benefits are known. Certainly, the picture of a recently cutover woodland will never make an album of America the Beautiful. Yet, this temporary, undesirable result of timber harvest has also brought income to the landowner, contributed to a major industry, has set into motion forest renewal, and has provided a diversity of wildlife habitat.

These are the forests in their earliest years, the seedling forests open to sunlight that share their outdoor stage for a moment with a vast array



Selective timber harvest and clearcutting management techniques used in the G.R. Thompson Wildlife Management Area have played a role in maintaining the spectacular display of wildflowers there. **Above:** Yellow ladyslippers; photo by Bill Lea.





of other plants—grasses, many wildflowers, and shrubs. With age, trees begin to play their dominant role and share their celestial spotlight with fewer and fewer members of the earlier supporting cast. Many of the original wildlife members also soon disappear. Waiting in the wings to make their appearance, however, are other wildlife species—those that find their needs met by sapling and pole-sized timber stands.

development; photo by David Coffman, VDOF.

The continued existence of one of the most exten-

sive and brilliant displays of wildflowers in Virginia occurs on forestland with a long history of selective timber harvest. This woodland show, featuring large-flowered trillium, continues to take place each spring on the Game Department's G. Richard Thompson Wildlife Management Area in Fauquier County. More recently, even small scale clear-cutting in areas harboring trillium has not had any noticeable impact in reducing this plant's colorful May Day parade. Indeed, these plants, like many others, may benefit from some forms of occasional soil disturbance, such as that brought by logging.

square foot of leaves. This weakens trees and could possibly lead to their deaths; photos by Tim Tigner, VDOF. **Bottom left:** The greatest threat to Virginia's forests are not insects, disease, or harvesting, but irrevocable loss to human

Clearly, however, there is also the need to maintain some forestland in old growth. Such stands are magnificent to behold and are absolutely essential to the well-being of certain other forest members. For example, many of the more secretive, migrating songbirds require large, uninterrupted, old aged forests during their stay in Virginia. Therefore, in dealing



As the forest changes, either naturally over time or through intentional forest management, so do the wildlife species. For example, the red fox (right; photo by Bill Lea) thrives in the early stages of a forest where rodents and other small mammals find plenty of food and cover. On the other hand, the black-throated green warbler (above; photo by Rob Simpson) requires mature, typically conifer, forests for nesting and raising its young.

with change, whether by choice or that brought by natural events, the best approach is to know what can be expected.

For many years, however, owners of small timbered tracts viewed hav-

ing a forest management plan with the urgency that most of us have for planning the management of our lottery earnings. Fortunately, another change, a heightened interest in actively managing woodlands, particularly small tracts, seems at hand. With a big boost from the Forest Stewardship Program, interest in planning the management of such tracts has recently been rising like the March sap in a Highland County sugar maple. Forest Stewardship plans have been developed for over 400 Virginia landowners in less than two years, most of these during the past year. According to the Virginia Department of Forestry, most of these plans are for owners of a hundred acres or less. Having myself visited sites or reviewed plans where wildlife is a major consideration, I have found a number of landowners enrolling in Forest Stewardship who barely have the 20-acre minimum forestland needed to qualify. This is a welcome turn of events.

Man cannot control every natural occurrence in the woods, nor probably should he have such broad power. However, with forestland declining at a rate of about 20,000 acres each year in Virginia, present-day foresters and progressive landowners recognize the need for responsible, active forest management—to protect, preserve when called for, and to make wise use of forest resources. It's all a matter of dealing with change.

Irv Kenyon is a special projects wildlife biologist with VDGIF.



# The Drawing Board

The first step in any forest stewardship plan is thinking about what you want to accomplish.

#### By Steve Mallet

have been managing forestland for more than 15 years and one of the most important things I have learned is not to make too many as-

sumptions.

I began my career with the Department of Forestry, and during one of those early training sessions that all new foresters must endure, I remember a story being told of a forester during the early 1900s who had prepared a management plan for an owner. The forester had examined the property and found considerable amounts of young hickory trees. In his report to the owner, the forester recommended that these trees offered long-term management opportunities. The forester knew that automobiles were rapidly becoming popular

and was sure that this technological marvel was the wave of the future. Since at that very brief point in time spokes for tires were made from hickory, he concluded that hickory would be of parallel importance. Long-term assumptions, I learned, can be particularly dangerous.

Usually, however, we are all under some type of deadline, whether it is a budget, a due date or the accomplishment of a project, and we tend to revert to a standard procedure to get things done quickly. However, it is important to keep in mind that when dealing with decisions affecting land, we can leave an impression on the landscape, both positive and negative, that will last for decades. Not only is a well-developed plan essential, therefore, but I've found that

when building its foundation, it's important to never get into too big of a hurry.

The development of the plan is a process and not an event which usually occurs at one meeting. When I first start working with a client, I try



to set aside a few hours to get to know the person, so that I can make sure that the management program I design meets their needs today and in the future. It is essential for me to have a clear understanding of the character of the owners and their family. What is their purpose of ownership? What is the history of the property? What are the current uses of the property? Are there special places of significance to the owner on the farm, such as old family homesites, unique natural communities like wetlands, caves or old growth tracts? Are there any outdoor interests that the owners and their family have that can be addressed in the plan? Are there any short or longterm financial needs that need to be considered concerning the property?

The standard management objectives of forest production that focus on wildlife management, soils and water conservation, recreation, etc., seldom fit an owner nicely, and a tailored plan may take longer, but it is usually worth the effort. Most of the time, the most successful practices are those that have been developed considering all the "standard objectives." For example, a well-designed shallow water impoundment for waterfowl can benefit all wildlife such as shorebirds, turtles, muskrats, and

butterflies, while providing yearround recreational opportunities and water quality benefits.

After I have learned something about the owner, I complete a variety of resource inventories to understand their land. These inventories

identify the location of various soil types, topographical and shoreline features, vegetation types, wetlands, rare or unusual wildlife species or habitats, and any other special characteristics that make the property unique. I then evaluate the capatimes time-consuming, ensures meaningful plans are prepared that don't just collect dust on the shelf, and in more cases than not are implemented.

Take my client who inherited several farms. During an initial meeting, we discussed management objectives. Although she was interested in aesthetics and forest production, I later found out in subsequent meetings that she was very environmentally conscious, she needed income, and was concerned about the long-term financial requirements of a medically disabled child.

On one of her farms supporting mature timber, most of the tract was well-drained, but was divided into several small parcels by drainage or riparian systems. These riparian areas were rich in vegetation due to the wetness of the site and the concentration of topsoils that had been deposited from upstream. Ostrich, chain, and maidenhair ferns were just some of the indicators of the rich bottomland and riparian habitat that existed there. Open areas could be found in the particularly saturated soils that supported large expanses of cardinal flowers. This diverse bottomland forest contained many hollows that harbored cavity nesting birds such as barred owls and pileated woodpeckers. Woodcock could be found probing the damp soils for tasty tidbits. Migrating songbirds could be found traveling along these corridors. The call of the screech owl could be heard echoing through the forest. And, early in the morning and at dusk, the deer would travel these corridors to the fields.

Thus, in designing a timber harvest to meet her income needs, we reserved the riparian areas from the harvest. The protection of these areas has maintained the unique environmental character of the tract and also served to compartmentalize the forested land into 3-5 acre parcels. Although the owner does not intend on selling the property, should she be forced to sell to meet the needs of her child, the forested compartments could be sold at a premium as secluded homesites rich in environmental character.

A Forest Stewardship

A Forest Stewardship
Management Plan is designed
to look beyond the management
of a single resource. Instead, it
strives to consider the effects of
any decision on all the
resources—natural, historic,
and recreational—while
achieving the landowner's
economic, environmental, and
aesthetic goals. Opposite:
photo by Robbie May, VDOF.
Above: photo by Dwight Dyke.
Right: Cardinal flower; photo
by Larry Ditto.

bility of the land, which allows me to explore various management strategies with the landowner prior to the development of a plan. I find that following such a system, although some-

This component of her forest management plan has served as an example to her neighbors. Several adjacent landowners have visited this tract and have chosen to provide equal protection to their riparian zones. Collaborative stewardship efforts at riparian zone protection can greatly magnify benefits and defy the laws of mathematics. For example, if two adjacent riparian zones are protected, together they can equal five in the potential environmental, wildlife and aesthetic values that can be produced.

I do not know what the future will hold in 30 or 40 years and will try not to assume that I do. I do know, however, that management for diversity will ensure that the land is capable of meeting the future needs of my clients or whomever may be watch-





ing over it in the future. This does not mean that pine plantations or single species wildlife management for quail or deer cannot be practiced. However, it does mean that the landscape should be managed to promote a diversity of habitat types and wildlife. Clearcuts followed by pine plantings

A Forest Stewardship Plan may include the protection of unique natural areas, rare and endangered species, or guidelines for improving wildlife habitat to attract and support particular species, but always, the plans look to the future. Above: photo by Rob Simpson.

**Top left:** Ruby-throated hummingbird; photo by Bill Lea.

Bottom left: photo by Gary Carter.

Opposite page: Resource specialists from different disciplines collaborate on the development of Forest Stewardship Plans, providing recommendations and technical assistance in implementing conservation practices on your land. Here, research biologists and foresters work together to manage forest habitats for rare species, such as the Northern flying squirrel (right; photo by Rob Simpson. Far right; photo by Lee Walker).



penetrated the canopy to illuminate hundreds of flowers in full bloom. The flowers were covered with butterflies while several ruby-throated hummingbirds probed the flowers gathering dinner. I left the woods that day with a sense of pride that I had met the objectives of the owner while providing for future generations.

George Bernard Shaw once wrote, "The reasonable man adapts himself to the world; the unreasonable one persists in trying to adapt the world to himself." The Stewardship Program can be a turning point for a new direction in land management. Success will require that all resource professionals broaden their focus to consider all of the elements that make up the landscape, including the forest, soils, wildlife, historic and water re-

from boundary to boundary without regard for the reservation of hardwood corridors, reserve trees, or riparian zones may meet the forest production objective today, but may fall short of satisfying the demands of tomorrow's wildlife, water quality, or aesthetic objectives. Wildlife food plots may be great for concentrating deer or quail, but they may fall short in sustaining maximum populations of diverse types of wildlife.

I had an opportunity to revisit my client's property a few weeks ago.

There was nothing particular I had to do, except to satisfy my curiosity. Although it was late in the day and daylight was short, I wanted to revisit the tract since it had been more than two years since my last stop. As I walked through the reforested area, the pines were well-stocked and vigorous and I knew there was nothing more that I could do to help them along. My pace quickened until I reached the place where I had originally come upon the cardinal flowers nearly four years ago while working on the management plan. Shafts of daylight

sources. The owners must become involved in the process of understanding their land's capabilities and special character. In this way, the Stewardship plans will sooner meet the owners' needs while providing tremendous public environmental benefits.

Mr. Shaw felt that all progress depends on the reasonable man. Stewardship can provide the reason. □

Steve Mallet owns a company, Resource Management Associates, that manages farm and forestland on the Eastern Shore of Virginia, Maryland and southeast Virginia. He serves on the state board of the Association of Soil and Water Conservation Districts.



### Steven Hopp

#### by Garvey Winegar

y 74-year-old mother, who lives in adjoining Scott County, would refer to at least part of Dr. Steven Hopp's Washington County farm as "woolly." Hopp is thinning sections of mature trees on some of his 125 acres. He is also allowing other adjoining sections—old fields and hollows-to more or less grow wild.

Mother wouldn't care for that last part. With the zeal of the early settlers who came from England, Ireland, Scotland and Germany to settle these magnificent mountains, she would attack the "woolly" mix of shrubs, rank weeds and small trees with

bush ax and scythe.

It's in her genes. Mother sees land that isn't either cleared or heavily timbered as having little value. İt may, she suspects, even reveal a strain of shiftlessness in the owner.

Hopp, 38, takes a different view. He calls his farm "scrubby"—a word he uses often—and is teaming up with nature to make it even more so.

Hopp is managing parts of his farm for white-eyed vireos, a small olive-colored bird with yellow-white spectacles. His interest in and management practices for vireos don't conflict with habitat needs for other wildlife on the place such as grouse, turkey, deer and even an occasional bear. He harvests some timber, and best of all, he doesn't have to keep the place looking like an English country

Hopp is head of the psychology department at Emory and Henry College near Abingdon. His Ph.D. is in experimental psychology, with a specialty in animal behavior and a minor in zoology. He has an additional degree in biology and a back-

ground in chemistry.

Why vireos? Why choose for study a nondescript little bird that hangs out in the scrubbiest places it can find? True, it has a dynamite voice and loves to sing, but few people have seen the bird and almost nothing has been published about it.

"Vireos picked me," said Hopp with a chuckle. "I was working for a guy in a primate lab, doing graduate study. He has some recording equipment, a \$3,000 tape recorder actually, that he wanted me to try in the field. I wandered out and happened upon the white-eyed vireo. They're small yellowish-green birds. In fact, 'vireo" is Latin for yellowish-green.

"These birds blend in. They're down in the scrub and you can't see them. Instead of visual prominence, they display vocal prominence. They're loud, explosive singers."

After recording the songs of several vireos, Hopp went back to the lab and put the songs into a computer more, he said, to check the recording equipment than anything else.

"When I got this voice print—this printout—of vireo songs, I went 'Mmmmm...very interesting,' " he said. He began to wonder what people knew about the bird: its vocal communication, nesting habits, natural history in general.

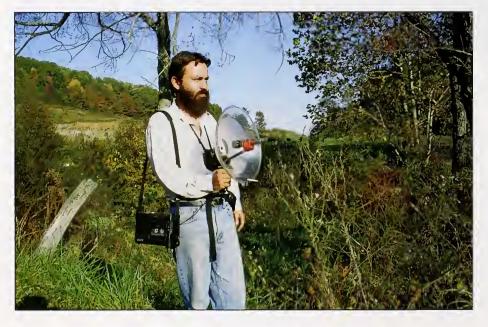
Practically nothing, it turned out. "This is a common species, yet very little literature had been published

on it," he added.

When he came to Emory and Henry College eight years ago, his study of vireos accelerated.

"I knew monkeys were going to be few and far between here," he said, "but by studying monkeys, I'd learned a lot about birds. It's really not such a big leap. A lot of theorizing, the evolution of signalling, the methodology of computer and sound analysis—they're similar for birds and primates. So I shifted interests."

He worked areas near the college where he could record songs and study the birds—as many as 15 nesting pairs that he banded—but devel-





Steven Hopp (opposite; photo by Garvey Winegar) records the songs and calls of white-eyed vireos (above; photo by Rob Simpson), which are attracted to the "scrubby" habitat he is managing for on his southwest Virginia farm. His Forest Stewardship Management Plan focuses on creating young forests with plenty of edge, scrub habitat and transition areas for the birds, which he accomplishes by harvesting selected areas of mature timber.

opment kept getting in the way. "When the bulldozers move in, there go the birds," said Hopp.

Consequently, he is attempting to transfer the study to his own farm. That takes some fine-tuning. "Vireos inhabit a window on succession,"

said Hopp. "By that I mean if you have all mature trees with a closed canopy, that's too much. If you have an open field that's all chest-high in growth, that's too early. White-eyed vireos like trees scattered in, but the ground needs to be scrubby. Vireo

habitat goes up and down, up and down."

After some judicious logging on the farm, Hopp believes he is headed in the right direction. The forests still march up Walker Mountain, where he can look off toward the Cumberland range into Kentucky on a clear day. But in the edges—the transition areas between forests and cutover areas—Hopp has left scattered mature trees mixed with scrub areas. The scrub areas are a wild profusion of secondary, deciduous bushes that include everything from sumac, dogwoods, multi-flora roses, young maples and poplars to wildflowers.

On Hopp's farm now is a lone male vireo. "When he moved here," said Hopp, "the place was either cleared out or mature forests. Hardly vireo territory. But vireos attract vireos. When one or more move in, others stop over during spring and fall migration. In three or four years, things ought to be great for the birds. It's going to be a lot of work, and it'll be up to me to maintain the scrub for them."

Vireo pairs need about an acre and a half per pair, but they truly like neighbors, said Hopp. "In order to have six or eight breeding pairs, I need 10 acres of transition area, and I don't have that right now. I'd like to just clear out the hillsides (of timber) but I'm a little reluctant to do that, so my motive has been to maximize the edges or transition areas."

Added Hopp: "I have trouble with massive clearcutting of virgin timber, but I have no trouble with thinning for wildlife management.

"Someone's always saying, 'I'll do you a favor and let some cattle graze here. It'll keep the bramble and scrub brush down.'

"And I say, 'No, no, no.'

"They say, 'It'll grow over your head in about two years,' and I say, 'Great.'

"They say, 'You'll get rats and field nice.'

"I say, 'Good, that'll encourage the owls.' "  $\square$ 

Garvey Winegar is the outdoor columnist for the Richmond Times-Dispatch.



### Bill Braunworth

#### by Jennifer S. Hensley

ost people wouldn't take too kindly to being called a manipulator, but then Bill Braunworth isn't like most people. What makes Bill Braunworth stand out? He is a large man in stature—especially when it comes to trees and wildlife.

"Quick" would suffice as Braunworth's middle name. He's quick to comment, quick to smile, quick to explain, but most of all, he's quick to see what needs to be manipulated in a forest to improve its quality, and just as quickly, he initiates the manipulation.

But how did he develop this second nature, this insight, which makes him such an expert at tree farming and creating habitat for wildlife? And how has he benefitted from the Forest Stewardship Program? I'll let him tell you himself....

"About 30 years ago, as a chainsaw representative covering the Maine to Virginia area, the first time I demonstrated a chain saw on a customer's property, I made a big mistake. A tree is a tree, right? Only after the tree didn't cooperate and fell on the chain saw—crunching it a bit did I realize I had cut an old apple tree. I thought I better get to know trees if I was going to sell chain saws.

"The more I learned about trees, the more interested I got in tree farming. Over the last 30 years, we've bought 1,302 acres, of which we now own a total of 550 acres at five different locations in Augusta County. We've made a good living...better than we did selling chain saws, and we've enjoyed it immensely.

"I've always believed in sharing with wildlife and even hunters, so when I heard about the Forest Stewardship Program, I signed up so I could learn to manage the habitat better for the wildlife while tree farming. See, I've always believed that nature had to be balanced. My main Stewardship objective is timber, but wildlife is tremendously benefitted by reforestation.

"Do you remember the area out in Marble Valley (Deerfield area) where I showed you the stand of Christmas trees? And just off the east edge of it, there were two brush piles within 20 vards of each other? And remember that hinged tree? (A hinged tree is a tree that is cut almost all the way through and thrown. The area where the tree is still attached to the stump allows enough nutrients to get to the tree to keep it alive, providing shelter and browse for wildlife.) It would have been easier and more economical to just clearcut the entire site and not worry about the wildlife; however, that's not maintaining the balance. I like the trees, but I like the wildlife

"Mother Nature is one cruel lady. Without the proper manipulation of sunlight, she might create a forest of





Bill Braunworth (left; photo by David Coffman, VDOF) has successfully managed his Augusta County farm to maximize timber and wildlife benefits. For example, he uses the innovative technique of "hinge cutting" selected trees (above; photo by David Coffman, VDOF) to create living brushpiles for small game (top; photo by Soc Clay), and reseeds logging roads with warm-season grasses to prevent soil evision and provide food for deer (opposite right; photo by Bill Lea) and turkeys (opposite top; photo by Tim Black).

60-year old oaks that are only four to five inches in diameter. But, if we step in and open up the canopy here and there, cut the inferior trees for firewood and make a general timber stand improvement, then we've improved upon Mother Nature. And remember the stand of trees where I had thinned out the damaged and inferior trees? The sprouts were starting again on the forest floor and the



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crop trees were looking good. If I had left it to Mother Nature, she would have continued to cut off the sunlight and no new oak or walnut sprouts would be coming up to eventually take the place of the crop trees. Manipulating the sunlight is the best forest management tool available for improving a forest...and improving



the forest is only going to induce wildlife into the area...

"Back to Marble Valley, do you think it is just coincidence that the grouse has made a dynamic comeback? Or that we see a lot of wild turkeys? And what about here on the farm; do you think it is coincidence that the deer are plentiful and the squirrels and rabbits enjoy the area? Or do you think it might be because I've let the brush grow up around the trees and me and the squirrels have planted oak and walnut trees?

"The deer could destroy my walnut saplings if they stood there alone, but with the brambles around some of them, others growing up through a nurse tree, and with the rest of them growing up through plastic tubes (a mini greenhouse), it all balances

Q. You've mentioned nurse trees and trainer trees several times. What exactly are they?

A. "See that six-foot pine over there with the walnut tree growing up through it? That pine is nursing or training that walnut tree to make sure it grows straight up and tall without limbs around the bottom that would degrade it economically. Again, we're manipulating the amount of sunlight that the walnut tree gets along its base. It might not look as neat as some tree farms, but I use this method on all my tree farms."

Q. Okay, we've heard the good stuff, now tell me about clearcutting. I noticed that you've clearcut some areas, but only thinned other areas. Why not do it all the same way?

A. "I know it's not a popular thing to say, but I am a proponent of clearcutting...if that's what is best for the area. Right now, selective harvest is politically right and clearcut is politically wrong. However, a damaged tree from selective harvest-and there is a great deal of damage to trees left standing during a selective harvest-is a wasted tree. Clearcutting can be an equalizer...it gets rid of past sins. If the best improvement technique for an area is clearcutting,

then it should be clearcut. The decision shouldn't be made from personal preferences, but from concern for the health of the forest and the wildlife.

"Balance is the most important part of tree farming. Everything we do, every tree we cut, affects other plants and wildlife. And if nature is already out of balance, then we can get it back on track by manipulating what we have at hand. An inferior tree is wasted space for a tree farmer and for wildlife. Dying trees are an economic loss to both man and animal. But a den tree has value to wildlife, so I always leave den trees standing.

"I also throw red-maples in February and March so deer can nibble on the sprouts. Not only does it provide late winter food, but it also keeps them from nibbling on Christmas trees. Balance...manipulation. Mother Nature's just going to have to face facts, we manage land much better than she does!"

Like I said, Bill Braunworth is a very manipulative man.

Jennifer Hensley is an outdoor writer and columnist living in Grottoes, VA.





photo by Dwight Dyke

### The Clearcutting Issue: It's not Clear Cut

by Al Bourgeois

he forest management practice of clearcutting is a proven, scientific timber harvesting technique for managing hardwood and pine forests. Yet, some consider it devastating to our forest resources and some sportsmen complain that it ruins their deer and turkey or squirrel hunting areas.

Why then do foresters and wildlife managers continue to use clearcutting to harvest timber and alter wildlife habitat? Can clearcutting be a beneficial forest management practice for wildlife? The answer is not simple, since each species of wildlife has its own particular

habitat requirements. Whenever we alter or change the forest, we benefit some species by creating new habitat and hurt others by eliminating their existing habitat. Which species of wildlife we are concerned with determines whether the management practice is beneficial or detrimental.

A discussion of clearcutting and its effects on wildlife should start with a clear definition of what we mean by clearcutting. For the purpose of this article, clearcutting is defined as a forest management technique where all the trees, large and small, are removed from a selected area at one time.

Before we can objectively evaluate clearcutting, we need to clarify some of the myths about it and sort out facts from emotions. We've all become familiar with the term "clearcutting" in relation to the Northern spotted owl and the old growth forest controversy in the Pacific Northwest, or have seen accounts of wholesale clearcutting in the tropical rainforests on the news. A logical question is "how can clearcutting be good when all we see and hear about it is bad?"

Although the 1990s have been labeled as "the Decade of the Environment" and environmental awareness is at an all-time high, we often miss "the rest of the story" on issues of importance. Our fast-paced, media-oriented lifestyles rely on 30-second sound bites on radio and television to supply us with information which

we often accept as truth without questioning the facts. After all, the news media has checked out all the facts—haven't they?

Many groups, however, exploit such reporting to advance their viewpoints, suggesting that it is environmentally devastating to cut down a single tree. For example, the tropical rainforests have been cleared, not for timber, but to convert these forests to cropland and pastureland by undeveloped countries trying to bring themselves into the 20th century. Clearcutting is frequently blamed for this forest destruction, when in fact these countries have practiced deforestation, not timber management. They simply use clearcutting to convert the rainforest to other uses.

Another case of "missing" information about clearcutting is worth mentioning. Our Eastern hardwood forests are quite different from the Western coniferous forests which are frequently cited in attacks on clearcutting. The Western forests still contain some true old-growth forest stands with area-sensitive wildlife species depending on them for survival. Some of these lands have been heavily timbered, using very large





clearcuts side by side, frequently on very steep slopes. These sites often must be planted back to conifers to grow a new forest stand, instead of relying on natural regeneration. In contrast, our Eastern hardwood forests are primarily second-growth forests (meaning they have been cut in the past) with little or no old-growth stands. Clearcut units are also much smaller, and the terrain generally less steep. These hardwood forests normally regenerate on their own without having to plant



"Clearcutting should be viewed as the beginning of a forest, not the end." A clearcut transforms an old forest into a new one, but its size and shape (below left; photo by Robbie May, VDOF) in relation to the surrounding landscape determines the extent to which the clearcuts are used by wildlife.

For example, an irregularly-shaped clearcut provides valuable "edge" areas where young turkeys feed on abundant insects and seeds (above, photo by Lloyd Hill). Left: Author Al Bourgeois shows a landowner tree sprouts in a clearcut browsed by deer in winter (photo by David Coffman, VDOF).

trees to begin a new stand.

All clearcutting cannot be defended, however, since bad examples of this practice have occurred. But, if we put aside the philosophical question as to whether or not trees should be cut down, what are the major objections to clearcutting? Different authors have reported that opposition to clearcutting centers around two major objections: clearcuts are visually unattractive and they lead to soil erosion.

Little can be done about the way a clearcut looks once the trees are removed. However, this is usually only temporary (3-5 years) and changes rapidly as the site regenerates a new forest stand. Regarding erosion, scientific studies have shown that cutting trees does not normally increase soil erosion. It's the roads and log decks used to get timber out of the woods that create the most soil erosion loss. If these disturbed sites are designed properly and stabilized with grasses, erosion is increased only slightly and is back to normal pre-cut levels after 2-3 years. Additionally, clearcutting, in contrast to other forest management practices, requires fewer roads, reducing the chance for erosion. Thus, the clearcutting controversy is often more a matter of human values than environmental degradation.

To understand why clearcutting is utilized as a forest management tool and how it affects wildlife habitat, we need to briefly discuss forest succession and ecology. Succession is the gradual change from one vegetative community to another. Over the course of 200-300 years, an abandoned field will gradually become a mature forest, as grasses give way to shrubs, then small trees and eventually large trees. If continued long enough, old-growth forest stands

will develop.

However, trees don't live forever. Many of the same trees that are part of a forest in 100 years probably won't be there in 200 or 300 years. Trees require different amounts of sunlight to survive. Some tree species (such as maples, beech, basswood, hemlock) grow well in the shade of other trees and are considered shade tolerant, while trees like oaks, hickory, yellow poplar, white pine or loblolly pine are considered shade intolerant and need full sunlight to grow. If forests are allowed to grow unharvested, the shade intolerant trees such as oaks and pines will reach maturity and die out, while the shade tolerant trees will survive. Our forests would likely change in species composition from oak-hickory-pine stands to more shade tolerant species like maple-beech-hemlock.

Clearcutting is used to regenerate

mature forest stands of hardwoods and pines, before they die (our oaks generally mature at 100 to 160 years depending on the species). The hardwood forests will regenerate naturally, as stump sprouts and young seedlings respond to the increased sunlight, while pine stands may need to be artificially planted if natural seeding is insufficient. By harvesting the mature trees, we allow the oaks, hickories, pines and other shade intolerant vegetation to grow and we maintain these forest types in our woodlands. In the past, natural events such as fire, insects, windstorms, and disease outbreaks acted much like clearcutting to maintain these vegetative communities. Clearcutting, therefore, should be viewed as the beginning of a forest, not the end.

Many of the shade-intolerant hardwoods maintained by clearcutting are the ones that produce hard and soft mast, which are important food sources for many wildlife species. In addition, clearcutting encourages the growth of many herbaceous plants and woody shrubs that provide additional food and cover for wildlife. Since mast crops (acorns, nuts, berries, grapes, etc.) vary from year to year, these alternative food sources are important to many wildlife species. The dense cutover thickets created by clearcutting also offer excellent cover. For example, deer seek shelter in clearcuts and browse heavily on the abundant tree sprouts in winter, while turkeys use these cutovers for nesting and feed-

Managing forestland, whether by clearcutting or other forestry practices, increases vegetative diversity in our woodlands and can improve the health and vigor of the forest. A mosaic pattern of different vegetative species (both pines and hardwoods) that vary in age from early successional trees and shrubs to mature or old growth forest stands can help to maintain biological diversity (the variety of plant and animal life in an area) as well.

The increase in vegetative communities resulting from clearcutting creates what is termed "edge." Edge

occurs where two different vegetative types come together (such as a clearcut stand and the surrounding forest). Edge provides habitat for a greater number of wildlife species, since many birds and mammals require more than one habitat type for their survival. The shape and size of clearcuts influences the amount of edge created and the extent to which these clearcuts are used by wildlife. Cutting units that are larger than 25 to 30 acres in size are not as beneficial to some species of wildlife as smaller, well-dispersed units can be. Irregularly shaped cuts create more edge than square or circular cutting units.

Not all wildlife species, however, benefit from clearcutting. Some of our forest interior breeding birds (some warblers, veerys, wood thrushes, etc.) have specialized habitat requirements and need large blocks of mature forest. The early successional habitat that results from clearcutting often fragments or breaks up these large blocks and can have a detrimental effect on their populations, many of which are experiencing declines. However, it is important to consider what the surrounding habitat is like when making forest management decisions relating to these birds. For example,

carefully planned cuts in the heavily forested mountains of western Virginia would have much less impact on these species than cutting into a large block of timber that is surrounded by open farmland in the Piedmont.

In summary, is clearcutting good for wildlife? My answer is definitely yes, but it depends on the species and the surrounding landscape. It is not applicable everywhere or for all species. Areas of old-growth forest and habitats for area-sensitive wildlife species need to be protected. Habitat fragmentation issues must be kept in mind. But clearcutting is a valuable forest management tool which foresters and wildlife biologists, as well as landowners, can use to create or maintain habitat for numerous species of wildlife.

Indeed, the biggest threat to Virginia's forest and wildlife resources is not clearcutting or other forest management practices. It is the loss of permanent forest habitat to human expansion, as concrete highways, parking lots, shopping malls and subdivisions replace our forests.

Al Bourgeois works west of the Blue Ridge as a wildlife biologist supervisor with VDGIF.



Clearcutting encourages the growth of grasses, berry-bearing shrubs, and dense thickets that provide food, cover, and nesting areas for many species of wildlife (above: white-tailed deer; photo by Bill Lea).



## George Beales

#### By Garvey Winegar

Problem: George Beales, 41, of Spotsylvania County wants to leave his 3,000-acre farm intact, healthy and productive for the next generation. "It's virtually impossible to do that with just farming these days," he said.

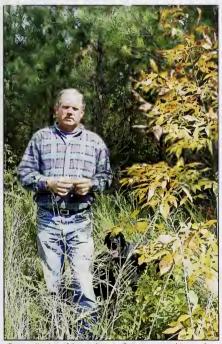
Solution: Diversify. Forget row farming. Look at other uses of the land to keep it all together. Spread out into related fields—timber production, wildlife management, livestock, recreation.

"The farm is a family trust and our outlook is long-term," said Beales. "It isn't easy. Spotsylvania is the fastest-growing county in the state. We're beginning to feel a lot of pressure from those who see land like this as an outstanding development opportunity, say, for housing."

Beales, however, believes he has found another way. "We're diversify-



Landowners are finding that they can supplement their traditional farming income by diversifying into timber production, wildlife management, and commerical recreation, such as sporting clays and hunting preserves, all of which can be addressed in Forest Stewardship Management Plans; photo by Randall Davis.



George Beales of Spotsylvania County is working to keep his 3,000-acre family farm intact, healthy and productive for the next generation; photo by Garvey Winegar.

ing with considerable timber production, a little farming to feed livestock, even recreation," explained Beales. "The emphasis now is for more recreational use of the land. We're thinking about commercial shooting, sporting clays, put-and-take hunting preserves—that sort of thing. We're trying to have as little impact on the land as possible, and to keep it relatively undeveloped by wresting income through other things."

Truth is, most of Beales' efforts and almost all his land is now devoted to forestry use (some 3,000 acres) with only a few hundred acres in crops that feed both livestock and wildlife. Recreational use is in the future

As one of the larger private forest owners in Virginia using the Forest Stewardship Program, Beales' background is especially useful. A geographer by training, he is a self-taught forester, though his brother is a graduate forester and is involved in decision-making on the farm. Beales is also active with the local Soil and Water Conservation District; is on the board of directors of the Association of Conservation Districts; and serves on the Virginia Department of Forestry's Water Quality Task Force.

Because of his experience and the careful way he manages his land, Beales is especially qualified to comment on two of the thornier issues involving timber management. Those issues are clearcutting—the act of cutting all timber within a certain area—and the replacing of hardwoods with pine plantations.

"I'm a middle-of-the-road person when it comes to clearcutting," said Beales. "I have small clearcut areas. Given certain soil productivity, many sites are best suited for pine plantations. Hardwoods just don't do that well in some areas, and we're not in an area of terrifically productive soil on this land."

Beales thinks the forest industry went overboard in the late 60s and early 70s when great chunks of forests were clearcut. "There were early excesses," he added, "and clearcutting has been given a bad name because of some of the effects of clearcutting in South and Central America, and indeed, some areas in our own country. I've seen photos of areas in the West that have been devastated that never should have been clearcut."

But, said Beales, the logging industry is definitely rethinking its policies. Part of the thrust for change, he said, is public opinion, but the industry is also coming to the realization that productivity of soils is important if the land is to be used again and again. "When you allow soil to erode away," he said, "you're just hurting your own future. We're learning to do things now in a much better way."

Among the things Beales does: he clearcuts only small areas, and is careful to simply thin, or selectively cut, stands of hardwoods on ground that might erode. He doesn't log when it's wet because ruts would form. Skid rows and logging roads are reseeded, converting the area into habitat for wildlife. He mixes forestry and agriculture to provide edges for deer, turkey, quail and other wildlife. He has some 1,400 acres of the farm planted in pines now, but is putting his efforts into hardwood regeneration, which he began in the early 80s.

"Hardwood management is more art than science right now," said Beales. "It's an art





**Top:** The ability to view wildlife is important to many people who own forestland; photo by Larry Ditto. **Above:** Pine plantations are not "wildlife deserts." Deer, among other wildlife, use the areas for food and cover; photo by Bill Lea.

because of variation in sites. Fortunately, more research and effort is being put into hardwood management these days, and that's good."

But what about pine plantations? Are they wildlife deserts, as some claim? "They aren't deserts at all," said Beales. "As a matter of fact, turkeys adapt well to pines," he added. "Deer love to bed down in pine plantations at night. They feel protected. Then they move out of the pines to feed in fields and hardwood forests. The whole timber management concept when I came to this farm in 1974 revolved around clearcutting, then replanting with pine plantations."

That is changing. Today, not-so-productive hardwood sections may be thinned to try to keep them in hardwoods for biological diversity; but also, said Beales, because hardwoods are more valuable commercially, though they take longer than pines to grow.

Beales would like to see Virginia get behind another management practice—controlled burning—that's used widely in other Southern states. Controlled or prescribed burning is done in winter when you get a "low burn," maybe 18 inches off the ground, said Beales. "Fire just sort of creeps through, getting rid of needle-fall and understory. It reduces the potential for wildfire. You don't get fire that's flashing high into your timber stands. The understory opens up and lets grasses come in. Not only does controlled fire increase the productivity of timber; it also increases wildlife habitat." 🔲

Garvey Winegar is the outdoor columnist for the Richmond Times-Dispatch.



### The Myth of Fire

by Pat Keyser

arshmallows on a stick, Yogi Bear and picnic baskets, and Old Faithful used to be the first things that came to mind for many of us when someone mentioned Yellowstone. Until 1989. Then everything changed. Millions of charred acres, smoldering blackened tree stumps, and scenes of legions of weary fire-fighters were seared into our consciousness by the evening news, as the nation watched Yellowstone burn. Yogi Bear seemed a long way off. But when the ashes settled and the evening news turned our attention elsewhere, what became of our nation's oldest National Park? To put it as simply as possible: a new beginning.

Whether a fire is in Yellowstone, Georgia or Virginia, the effects are very similar. Much of the existing vegetation is removed and a scene that may make us think we're on the dark side of the moon greets our eyes. But a fire in February, for instance, will be followed in March by an explosion of greenery. Annual plants take advantage of the removal of competition and quickly become prevalent throughout the area. Perennial plants sprout back rapidly from the root. Like the annuals, they thrive in the absence of competition,

and with the removal of old dead material, are free to grow vigorously. Even woody brush and trees of many species will sprout back and grow

up to six feet tall or more the first growing season!

How does all this sprouting and new growth I'm referring to affect the wildlife in a burned area? Well, to go back to the example of Yellowstone, what has occurred in the wake of that fire is a tremendous boon to the elk, bison, grizzly, mule deer and moose, just to name a few. You see, the vigor of a population of wildlife is a direct reflection of the vigor of the habitat upon which it depends. Not only did the 1989 fire stimulate many plants to grow, but it affected how these plants grow. Many studies have borne out the fact that seed crops on areas burned within the previous two to three years are by far more abundant than similar areas that have not burned. Those of you who have filled a bird feeder this winter know what abundant seed means to many species of birds.

Other studies have confirmed that after two years or more since burning, fruit production increases considerably on such species as wild blueberry, huckleberry and blackberry. Care to take a guess at what three of the most important foods for bears (whether a grizzly in Yellowstone or a black bear in Virginia) are during



the summer months?

Another important change that occurs after a fire is in the nutrient level of the plants. When the existing plant material, litter and dead limbs, etc. are burned, the nutrients are released and act as fertilizer in the soil. The plants growing after the fire are able to take advantage of this increased soil fertility. Analysis of leaves of several species of plants on burned areas have revealed protein increases of 50-70% over that found in unburned areas. Phosphorous content follows a similar pattern. These two nutrients are both very important components in the diet of browsers such as deer, elk and

Before you jump to the conclusion that it took the science of the 20th century to show us the ecological bene-

fits of fire to wildlife populations, let's take a quick look back to the 1600s. Early European explorers found that American Indians regularly used fire in the piney woods of the South to improve the quality of the forage, which in turn improved the hunting. Many Virginians today are unaware that the Shenandoah Valley has always been an open grassland, where eastern woods buffalo, elk and white-tailed deer roamed. This area was kept open and in a productive condition by fires set by Indians.

All of this may sound backwards to many of you. Fires providing a "new beginning" where plants become rejuvenated, and wildlife from songbirds to grizzly bears thrive? What about Smokey? Doesn't fire kill wildlife? I sure am glad you asked.

You see, one of the greatest myths wildlife biologists and foresters interested in managing land for wildlife have to contend with is that fire is detrimental to wildlife. In reality, using fire under controlled conditions (known as prescribed burning) is one of the most valuable and effective tools available to land managers for improving wildlife habitat. In reality, intensive studies of areas that have been prescribed burned indicate that few if any animals are actually killed by burning. Turtles, snakes and rodents simply go into burrows. Birds fly away and larger mammals leave the area. One study of radio telemetered deer conducted in Georgia showed that these animals did not run in panic from prescribed fires (like Bambi in the movie), but simply moved into wet or swampy areas



until the fire had passed. In reality, few if any nests or young are harmed by prescribed fire since it is generally conducted in winter months.

While fire is actually beneficial to many different types of wildlife, it is still a force with tremendous destructive potential. Homes, barns, crops, young pine trees and other personal property are all at risk from wildfire or improperly conducted prescribed burns. Human lives can even be lost. So, keep listening to Smokey. Don't play with matches! If you own property and are interested in improving it for wildlife, seek professional advice before doing any burning. Be sure that it is the best tool under the circumstances. Be sure it is the best time to burn, and that the proper weather conditions are present before starting any burning. If you don't have any experience using prescribed fire, do not try it. Hire or get someone to help who is experienced.

Today, throughout the country and especially the South, biologists, foresters and land managers prescribe burn millions of acres annually. From the mainstay of quail management across the South, to the Great Dismal Swamp for black bears, to the Appalachian Mountains for wild turkey brood habitat, to coastal marshes for geese and muskrats, prescribed burning has proven to be a valuable tool. For endangered species such as Bachman's sparrows and red-cockaded woodpeckers, it may be more than just an important tool. It may mean survival for the species.

So, forget the myth that fire is harmful to wildlife, but don't forget one very important thing that Smokey has told us: "Please be careful."

Pat Keyser is a wildlife biologist supervisor with VDGIF working in Southside, VA.



Studies have shown that prescribed burning increases the fruit production of native species such as huckleberries, blackberries, and wild grapes (above; photo by Bill Lea), preferred foods of black bears (opposite; photo by Bill Lea) and wildfowl (Bobwhite chick, top; photo by Lloyd Hill).

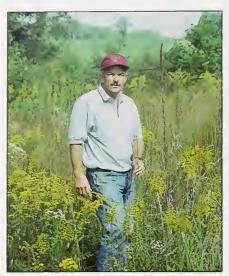


Like a farmer plows his land for seeding, foresters use prescribed burning to prepare cutover areas for planting trees. Wildlife managers recommend seeding millet, sorghum, lespedeza and other grains in newly burned areas (above; photo by David Coffman, VDOF) to provide immediate benefits to wildlife.

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# James Keesee



Dr. James Keesee of Stuart, VA uses prescribed burning as a tool to manage his 425-acre farm for timber production and wildlife habitat improvement; photo by Steve Ausband.

#### by Steve Ausband

here was one covey of quail on this place when I bought it in 1977," Dr. James Keesee told me, sweeping his hand in a general direction across a large expanse of white and loblolly pines, over the line of hardwoods beyond them, and toward the Mayo River, which winds around a large section of his 425-acre farm. "Now I can locate at least four coveys. I can sometimes see 25 or 30 rabbits just by driving slowly down this roadbed an hour before dark. And the deer are everywhere. The management plan for the whole farm emphasizes the production of wildlife and timber."

He sounded proud; I figured he had every right to be. Keesee, a dentist in Stuart, has had his farm in the Forest Stewardship Program for the past two years, and he has received help from the Virginia Department of Forestry almost from the start. It was my very pleasant duty to go on a tour of his farm and see firsthand the results of careful planning and cooperation by foresters and landowner. I found myself particularly interested in the use of fire as a management tool.

I don't remember what I expected when I first heard about prescribed burning as a tool for managing woodlands and wildlife. Charred stumps and piles of ashes, maybe. Blackened earth with a few, meager patches of grass beginning to emerge. What I saw instead was some of the richest and most diverse wildlife habitat, and some of the healthiest stands of young pine trees I have seen anywhere.

We stopped the truck beside a 60-acre tract that had been timbered, burned, and replanted three years earlier. Bordering the tract on one side was a field, on the other an expanse of mature hardwoods.

"We made the borders of the cuts irregular, creating more edge for wildlife," my host explained, pointing to the wandering line of new pines adjacent to the hardwoods. "This little field was replanted in clover and small grains. There's plenty here for birds and rabbits." There was, too. And in the burned-over area, amid the even rows of pines, was a wonderful tangle of blackberry canes, volunteer clumps of lespedeza, and succulent plants. There were deer tracks in the bare earth of the roadbed, along with the footprints of a fox.

"The burning got rid of all the ground clutter," Keesee said, "and so replanting was a good deal easier than it would have been otherwise. Furthermore, there's some thought that the fire releases nutrients into the

soil quickly, and so you get regrowth of all kinds of plants almost immediately." He stepped just off the road, far enough to point to a cluster of blackberry and pokeberry growing around the base of a fire-blackened snag. "This is perfect," he said.

The trees were already higher than our heads, even after just three years of growth, and the new growth among the trees would have made passage through them difficult for a man, though not for a deer or a fox. I stood in the bed of the pickup for a better look and snapped a few pictures

"Some people wouldn't think this is pretty," Keesee said with a smile. "It's too tangled, too grown over.









Prescribed burning releases nutrients into the soil quickly, allowing new growth, like pokeberries (opposite below left; pluto by Pels) and blackberries, to flourish. It also removes ground clutter, making it easier to plant pine seedlings (opposite top left; pluto by Deboralt Mills Southard).

Designing cutover sites with irregular borders, a practice Dr. Keesee uses on his Tree Farm, creates more edge (translating into food and cover) for small game like rabbits (top; photo by Garry Walter) and foxes (above, photo by David Vinyard).

Doesn't look like a lawn with pine trees in it. But anybody who knows anything about the needs of wildlife would think it looks just fine." We admired a pile of unburned stumps that had been pushed up in a long, straggly line at one edge of the grassy field. That would certainly look like an eyesore to a landscaper, I thought. To me, it looked like a condominium for rabbits.

Not all of Dr. Keesee's timbered tracts have been burned over, but all of them have been harvested and replanted in a way that reflects the two priorities he specified when he became a part of the Forest Stewardship Program. The other two options (water quality and recreation) were already a part of the way he was handling the farm. We drove along the new road he had cut down to the river bottom land, a path he chose because it was less steep and therefore less subject to erosion than the old road. Where the road crossed a small stream, he had placed a pipe and shored up the edges with rocks gathered from the area. The water was clean and clear.

Keesee is enthusiastic about the program, and he emphasized several times that it is not necessary to have a big tract of timber in order to qualify for aid from the Department of Forestry. "Everybody should have some sort of plan," he said. "You need to decide what your priorities are, and then set about in a methodical manner to achieve the results you want. Things don't just happen by themselves. Even a 20-acre tract can benefit from planning and careful management. Tree farming is just like any other kind of farming. You decide what you want to produce (in my case, trees and wildlife) and you set about making it happen."

Steve Ausband is chairman of the English Department of Averett College in Danville.

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### Wildlife Futures

#### by Robert T. Dennis

t was November 20, opening day of the 1989 regular deer season. At very first light and 29 degrees (too warm by my standards), I settled into my favorite tree stand: a pressure-treated, platform-and-ladder affair atop a hardwood knob on the back end of my Rappahannock County property. No doubt all hunter-landowners have favorite stands. Hike mine because it's a great place from which to watch the sun rise over the uppermost Rappahannock Valley. The river is at least 100 feet below me; a neighbor's bottom

field on the Fauquier side is emerald under early light. And deer come by almost every time I sit there.

But 1989 held special interest, for that summer a timber buyer had taken all the pines off my next knob over, down nearly to an intervening draw. This was part of a management scheme to speed conversion of what I still call "Pine Knob" to hardwoods. The pine harvest had effectively recreated views I'd known more than 35 years earlier. So I sat that dawn on my perch looking down on a 10-acre patch of particularly challenging terrain, remembering all the years I'd still-hunted deer

there as it evolved from old field to pines to young hardwood jungle and trying to anticipate the new deer traffic patterns I was about to experience.

About seven o'clock, a 6-point buck came out of the sunrise and up the ridge from the river, passing close beneath my stand. But I no longer shoot bucks larger than forkhorns—and for management purposes as well as meat quality, I usually hold my tags for doe season (unless, of course, I encounter a wounded animal, which happens rarely but too often).

At 7:20, two deer drifted off Pine

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photo by David Coffman

Knob, hung around out of range for 15 minutes, mysteriously became three, and melted away to the east. At 7:45, four does chased by a probable forkhorn followed the same route more quickly. The next hour brought glimpses of other deer in the newly cut area, followed by a south wind which pushed the thermometer to 60 degrees. So, I called it quits after a highly satisfactory opener—glorious sunrise, reminiscences about enjoyment of the land, many deer seen, weeks of the same yet ahead.

But, perhaps I derived the most pleasure that morning from knowing that the future was secure for my woods and their wildlife. I experience that pleasure every day. At the end of 1992, my involvement with this family property goes back 40 years. Now age 56, my involvement

likely won't continue another 40 years. But the property will continue, and the woods will continue, and the wildlife will continue.

Today, Virginia is losing farmlands and wetlands and habitat at an alarming rate. We lose an acre of forest about every 20 minutes 24 hours a day, 20,000 acres of Virginia woodland every year. That doesn't count my pines that went to the pulp mill in 1989, because my woods remain. We're losing our farms and wetlands and forests to the mindless sprawl of subdivisions and shopping centers and fast food strips that has recently passed for "progress" in Virginia. And where we don't pave everything over, we scatter clumps of houses and other "development" across our rural landscapes in patterns that often make it impossible to farm, manage timber, or preserve wildlife.

Fifteen years ago, my family decided that our Rappahannock property would never fall victim to such "progress." We decided that our property ought to and would remain permanently in some mix of agricultural and forest uses. Future generations will determine the mix, but they cannot destroy the rural integrity of our land. In 1977, my wife and I donated to the Virginia Outdoors Foundation an "open space easement in perpetuity" on the 90 acres of family property we then owned, and the same day my aunt did the same with her 60 acres. In 1980, my brother and his wife placed their land under easement-making a total of 234 acres of Dennis family fields, woods, and wildlife habitat permanently protected by documents enforceable by the Attorney General of Virginia. These easements are deeds granting a few of our many rights of ownership to be held in public trust by an agency of the Commonwealth.

Without question, my family gave away subdivision and building rights of measurable value. But market experience makes clear that future generations will derive substantial return should they decide to sell. Meanwhile, we have protected ourselves from uncaring people in distant places who—were it not for the easements—might decide that our

"vacant land" was a great place to locate landfills, roads, power lines, or something similar. Most important, because of the easements, future generations will assuredly enjoy our deer and bluebirds and wildflowers—all, at least to my family, worth more than a bit of extra money in the bank.

When we granted those easements in 1977, I got the impression that several neighbors judged us to be eccentric—at best. However, given time, people think things over and perceptions change. By 1992, the 234 acres protected by my family have stimulated similar actions by others, so that we are now part of an easement cluster of 1,100 acres—which promises to continue growing in the years ahead.

Most of those 1,100 acres are subject to coordinated forest, wildlife, and hunter management plans. Most, with landowner permission of course, are available for a variety of recreational uses. The people who hold seasonal permits to hunt on our joint properties seem to find as much comfort in the easements as do the landowners; the knowledge that this block of habitat will remain intact has



It is essential that landowners make sure their land is secure for farms, forests and wildlife, and not subdivided or paved over by "progress." With the help of open space easements, the rural landscape of Virginia can be preserved (above: fire pink; photo by Bill Lea).

brought those hunters to provide more assistance in managing our properties than I believe we could

otherwise expect.

Today, with leadership from the Virginia Outdoors Foundation and Department of Historic Resources in Richmond, and regionally from The Piedmont Environmental Council (P.O. Box 460, Warrenton; 1010 Harris Street, Charlottesville), 72,000 acres of Virginia's northern Piedmont have been protected with conservation easements voluntarily donated

by private owners. Elsewhere, such organizations as the Chesapeake Bay Foundation (1001 E. Main, Richmond) and Valley Conservation Council (P.O. Box 2335, Staunton) are helping landowners design easement projects. So are consulting foresters, attorneys, and estate planners (contact North American Resources Management of Charlottesville; read "Preserving Family Lands," P.O. Box 2242, Boston, MA).

As private land values increase, so do questions relating to both conti-

nuity of ownership and natural resource futures. Several tools are available to help the private owner deal with this problem; the conservation easement in perpetuity is the strongest and most certain of those tools. As one who donated such an easement 15 years ago, I can testify that every day brings renewed comfort that I did so.

Robert T. Dennis is currently the president of the Piedmont Environmental Council in Warrenton.



### Farrar Howard

#### by Bob Gooch



Dr. Farrar Howard checks a deer stand for safe footing on his 540-acre family Tree Farm in Charles City County; photo by David Coffman, VDOF.

ith five sons and a daughter all forging their way in the world—and doing well—retired family physician Dr. Farrar W. Howard of Providence Forge is a strong advocate of family values. "That's one reason I bought this

land," he said recently. "With five wild boys, I needed something to control all of those young male hormones. I bought an old truck and some chain saws and when they became 14 or 15 years old I put them in the woods to thin and cut pulpwood. Today they look back and thank me."

Dr. Howard's 540-acre Tree Farm, located on a broad bend in the James River in Charles City County, is called Mapsico for the creek that flows through it. He also owns another 90 acres in the county, known as Blackwater Swamp, plus 100 acres in New Kent County called Doctor's Creek where he and his family live.

"People used to criticize me for sending the boys into the woods with chain saws," he said. "I agree there was some risk, but not nearly as much as letting them loose on the highways in an automobile."

His sons learned from the experience. "I paid them by the truck load," he said. "They would cut three or four loads a day. It made them men physically, and they learned to appreciate the value of a dollar."

A hedge against inflation also played a role in Dr. Howard's decision to invest in land. Most of it is in

pine and hardwood forest. "You have to balance economic, environmental, and recreation values," he said when I visited with him in early September. That vision led to the Mapsico Tree Farm, one that won him Outstanding Tree Farmer of the Year for Virginia in 1984, and the same recognition on a regional basis in 1985. He was runner-up for Outstanding Tree Farmer of the Year in America in 1986. Additionally, he was named Forest Conservationist of the Year in 1985 by the Virginia Wildlife Federation.

Dr. Howard's Tree Farm has always been a family operation. "Back when I was practicing medicine I







Dr. Howard's farm is used by family and friends for recreation and for demonstration tours sponsored by Virginia Tech and Soil and Water Conservation Districts to show other landowners the benefits of forest stewardship management (Opposite page; photo by David Coffman, VDOF). But, the Forest Stewardship Program looks at much more than trees. Other resource values are considered with the help of such organizations as the Department of Historic Resources and the Department of Conservation and Recreation, guaranteeing that the special qualities of the land are protected and managed for succeeding generations. (Top: bald eagle; photo by Bill Portlock. Above: archaeological survey; photo by Dwight Dyke).

would take off Wednesdays and go into the woods with the boys. Even today we get the entire family out there several times a year to work, and then finish the day off with a hay ride or a campfire and hot dogs."

Looking to the future and the interests of his family, Dr. Howard has established a limited partnership through which he will gradually pass on his forestlands to his heirs. More recently, he has applied for and entered his forest property in the Virginia Forest Stewardship Management Program of the Virginia Department of Forestry, one that recognizes the multiple use of forestlands. A desire to protect possible unique values of his land has resulted in a survey for rare plant life by the Division of Natural Heritage and a search for archaeological values by the Department of Historic Resources.

While his family has enjoyed and worked in the forests over the years, Dr. Howard has not limited that pleasure to his wife and children. "We've had the Boy Scouts, Girl Scouts, a Senior Citizen group from Richmond, and even a student forestry class from Pennsylvania State University out here."

And while economic need has caused him to focus on good forest management with the wise counsel of the Virginia Department of Forestry, he has not neglected wildlife values.

Controlled burning and approximately 15 acres in wildlife openings of 1/2 to 5-acre plots enhance the land for wildlife. The plots are planted in buckwheat, clover, and milo. Most are alongside a 10-acre pond that was impounded a number of years ago. We saw a pair of bald eagles circling overhead near the pond, and a red-tailed hawk flushed from a tree beside the road.

Beavers haven't been a problem, but they could be unless there is a revival of an interest in trapping. "We have put up a great many wood duck boxes," he said, "but the ducks seem to use Mapsico Creek for reproduction even though they spend a lot of time on the pond."

Charles Čity, of course, is noted for its high deer populations and Mapsico has good whitetail populations. "We have several deer hunts each season and take 30 to 40 deer."

Strips of lespedeza line the roads that form a network through the Tree Farm. "We also plant a lot of ornamental plants such as azaleas, daffodils, day lilies, Chinese chestnut, and pecan. No money in them, but we enjoy them." There are also acres of running cedar and good stands of wild grapes.

The desire "to keep doing something," has taken Dr. Howard beyond his successful Tree Farm and his duties in the forestry industry. "My wife and I are volunteer medical missionaries," he said. "We just got back from Budapest. Lived with a fine Budapest family, but we couldn't speak their language and they couldn't speak ours. It got kind of amusing, but I found out that the husband could speak German so I brushed up on what I could remember from my German class at the University of Richmond."

A life devoted to a rural medical practice and volunteer service as a missionary are Dr. Howard's gifts to humanity, but his Tree Farm and the work ethic learned there are his legacy to his children.

Bob Gooch is an outdoor newspaper columnist and author of several books on hunting and fishing. He lives in Troy, near Charlottesville.

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### J.R. Branscome

#### by Bob Gooch

ood forestry management and wildlife are compatible. "They complement each other," said Dr. J. R. Branscome of Hume. You don't have to meet Dr. Branscome personally to realize he supports that belief. Turn into his driveway off Virginia Secondary Route 688 in Fauquier County and several attractive signs greet you. This is the entrance to Edge Barton, his 273-acre Tree Farm.

Most conspicuous is a soft green and white sign on the right that reads "Stewardship Forest" with a pair of trees, an evergreen and a hardwood, separating the two words that tell much of the story. To the left there is a yellow and black sign stating that the landowner is a "Coverts Cooperator" for the Ruffed Grouse Society of America. And just beyond the grouse sign is another green and white one designating the property as a certified Tree Farm.



Dr. Branscome is a supporter of the Ruffed Grouse Society's Coverts Program, designed to improve liabitat for ruffed grouse. Even if you don't own land, you can support the principles of land stewardship by joining such conservation groups; photo by Lynda Richardson.



Drive slowly down the driveway bordered by freshly mowed strips of grass. You don't want to kick up dust. It has been a dry summer in Fauquier County, but neither do you want to miss the wildlife plantings that greet you. On the left between the driveway and a rich hardwood forest is a lush wildlife patch. "We planted buckwheat, millet, milo, soybeans, and sunflowers," said Dr. Branscome.

Between the wildlife patch and the hardwoods is an edge of autumn olives. "Good for turkeys and other wildlife." A bit beyond the wildlife patch just as you enter the yard, a row of chinquapins borders the driveway. "They came up naturally."

By the time you meet Dr. Branscome on the stoop of his attractive two-story brick home, you feel you already know him. After all, isn't that part of what an entrance to a home should do?

"I bought the place in 1969 from some members of the Pabst family, the beer people," he said. "They built the house in 1963, planning to use it for hunting foxes, or riding to the Above: Dr. Jim Branscome and author Bob Gooch survey beaver activity on Thumb Run from a footbridge connecting hiking trails that lead to deer stands on the farm; photo by David Coffman, VDOF. Opposite page: Ponds built as part of a soil and water conservation plan (bottom right; photo by Soc Clay) not only provide fine fishing holes, but they can be enhanced for waterfowl by creating islands where geese can nest protected from predators (inset; photo by Michael Gadomski). Plus, by leaving selected den trees standing, you can provide homes for wildlife such as the squirrel pictured above right; photo by Lloyd Hill.

hounds. But, after two years they went back to Milwaukee."

He also owns a 100-acre farm in Shenandoah County which he bought in 1964. That, too, is being managed for both forestry and wildlife.

Dr. Branscome is no newcomer to Virginia. He is a native of Carroll County, and his stepfather is a relative of the folk hero Floyd Allen of the famous Hillsville courthouse shoot-out. "He wasn't involved," he chuckled.

Dr. Branscome recently acquired the Carroll County family place. He pointed to a rail fence beyond a



pond. "Those chestnut rails are at least 200 years old," he said. "They came from the family farm near Hillsville."

His attention turned to the pond sparkling in the early September sun. "I built it in 1969 for water conservation, wildlife, and livestock use." Several horses and a young mule grazed nearby. One of his two sons is a horse trainer and rides to the hounds. "The island in the middle is for nesting geese. Sometimes as many as three pairs nest there. They

grow up and fly back and forth between the pond and nearby feeding areas."

Dr. Branscome didn't say so, but it's easy to assume a lifelong interest in hunting and fishing led to the purchase of Edge Barton and a deep interest in forestry management. Working with state forester Bob Boeren and the Fauquier County Extension Agent, he established a soil and water conservation plan

soon after he bought the property, and soon thereafter he built the pond and stocked it with largemouth bass, bluegills and channel catfish. He has since erected wood duck boxes as well as boxes for nesting bluebirds.

Timber harvest so far has been limited to a stand of Virginia pines which was clearcut, burned, and replanted in loblolly pines. "I don't plan to clearcut the hardwoods," he said, "but will harvest them selectively"

Some land has been cleared for



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pastures, growing hay, and planting wildlife plots. In clearing this land, he left wildlife food trees such as dogwood, persimmon, volunteer apple, walnut, wild cherry, and wild grapes. One apple tree was loaded with fruit above a browse line established by feeding deer.

With financial help from the VDOF Stewardship Incentive Program, a fescue field is to be converted to native grasses which are more

beneficial to wildlife.

Most of the land has been left in hardwoods and pines, with the cattle fenced out. Hardwood trees and den trees on both sides of the stream below the pond have been left standing. A small stream that serves as a boundary between two stands of the loblolly has also been protected by strips of hardwoods.

Thumb Run, a sizeable creek that flows eventually into the Rappahannock River, divides the farm which was certified as a Tree Farm in 1985. "Beaver have built several dams on it," he said as we walked across a sturdy footbridge made of oak logs. "They are also building dams on about a half dozen smaller streams."

Dr Branscome is a deer hunter by preference. He had just bought a new Thompson/Center muzzleloading carbine. "I also like to hunt turkeys, but they are down from what they were a few years ago."

"Never see a rabbit," he said. "This is fox hunting country and the foxes are protected. That might be the problem. We do have plenty of squirrels and a couple of coveys of quail. Not many grouse yet."

Dr. Branscome's efforts have not gone unnoticed. Being named Wildlife Conservationist of the Year in 1989 by the Virginia Wildlife Federation recognizes his deep interest in wildlife. His long-time dedication to conservation of both forests and wildlife also brought his farm into the Virginia Forest Stewardship Program of the Virginia Department of Forestry.

Nor are his conservation efforts limited to his Fauquier and Shenan-

doah County farms. He is a lifetime member of the National Wildlife Federation, the American Forestry Association, and the Virginia Forestry Association, and a member of the Virginia Wildlife Federation, the National Wild Turkey Federation, and Ducks Unlimited.

Edge Barton after Dr. James R. Branscome?

"The boys and I have discussed that," he said. "But we need professional tax advice, which we'll get soon."

Obviously he plans to see that the fine work he has done will live beyond his own years.

Bob Gooch is an outdoor newspaper columnist and author of several books on hunting and fishing. He lives in Troy, near Charlottesville.



With cost-sharing assistance from the Stewardship Incentive Program (SIP), wildlife habitat improvement practices can be completed as recommended in a Forest Stewardship Management Plan. An example includes planting or retaining trees which bear valuable fruit for wildlife, like persimmon (inset left; photo by Gary Carter), dogwood, walnut, hickory, oaks (acorns pictured inset right; photo by Susan M. Glascock), and wild cherry (above; photo by Bill Lea). A variety of seedlings beneficial to wildlife can be purchased from the Virginia Department of Forestry.



Great horned owl; photo by Gerald Fuehrer.

### A Report to The Stockholders

by Bill Cochran

ow is an ideal time for woodland owners to take an inventory of their property, when the dormant hardwoods offer easy viewing against the winter sky. I did that the other day, hiking well off the ease of the seeded road that snakes through our mountain property. After that, I spent time studying our 10-year management plan to determine where we stand: what has been accomplished, what hasn't; what is working, what isn't. About 75 percent of the woodlands in Virginia are privately owned, their 11 million acres in the care of some 300,000 individuals. How well are we doing?

You might call this my annual report to the stockholders, not just family members, but also deer, bear,

turkey, grouse, squirrels, songbirds, hikers, hunters, anglers—anything and everything that benefits from our place and the management we apply.

Twelve springs ago, we began planting several patches of white pines, in fields where the previous owner had pastured sheep and cattle. They were bare-rooted seedlings, 8 to 12 inches long, a burst of green needles wrapped around a small stem. You could put a bundle of 1,000 on your shoulder.

Our first and largest planting was 10 acres, and the trees, fighting for their space in the sun, now are thick and tall and even inhospitable to any human trying to push through their overlapping branches.

Some people consider the white pine to be a garbage tree as far as benefits to wildlife, but ours provide cover for a number of wildlife species, a place to rest and nest away from the prying eyes of predators, even those toting guns. There is a trio of grouse that has escaped into them more times than I care to report, rocketing from adjacent hardwoods into what might as well be a bank vault.

Deer like them, too, pushing narrow, but well-defined paths through branches that grow to the ground. The neighbor's youngster got a five-pointer this fall when the buck made the mistake of stepping into the sunshine. No telling how many haven't made that mistake.

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Early on, we planted autumn olives and apples, Chinese chestnuts and gray dogwoods. The deer ate the apple trees the first year. We replanted them and when they disappeared a second time, we planted again, this time in wire cages. We were learning whose place this really was. No matter how laudable the effort, more than just a shovel and fresh nursery stock often is needed to establish food for wildlife.

One of the best approaches is natural regeneration through a management plan that involves some timber cutting and timber-stand improvement projects done with the assistance of a professional forester. The Virginia Department of Forestry will help you get started. In 1990, it established its Forest Stewardship Program to provide technical assistance to private landowners with a special interest in establishing conservation

practices. The agency, which has offices across the state, even will sell you the trees and shrubs needed for forestation and wildlife habitat. Now is the time to order them.

The key to accomplishing forest wildlife management likely will be the manipulation of the forest itself. You may want to build your woodland around a certain wild creature, but most species will do best where trees and other plants are grown in a variety of kinds, ages, sizes and shapes to meet the needs of wild creatures throughout their life cycle.

A turkey, for example, prefers mature hardwoods where mast is abundant. It also requires edge for nesting and open patches where chicks can find insects the first month of their existence. Our best grouse population is in a section where we had a timber sale nearly a decade ago. We removed enough mature hardwoods

to let the sun smile on the forest duff and stimulate the kind of plant growth this species needs for food, cover and escape from predators.

Deer are doing well in a timbersale site that is about 6 years old. There is enough browse here for polishing antlers and filling bellies. We have left hawthorns and wild grapes for soft mast, and plenty of snags for owls and woodpeckers. Songbirds like to nest and roost in our Christmas trees and this fall a bear took a special interest in our apple crop.

Most of the stockholders appear to be happy, but there always is more to do if you own woodland. □

Bill Cochran is the Oudoors Editor of the Roanoke Times and World News. This article originally appeared in the January 7, 1992 edition of the Roanoke Times and World News, and is reprinted here with their permission.



Like any Fortune 500 company, forestland, when properly managed for a "diverse portfolio," such as scenic beauty, recreation activities, clean water, wildlife habitat, and forest products, can return valuable dividends which are shared by both the landowner and the "stockholders" (above: wild turkey with poults; photo by Lloyd B. Hill) who live on the land.



#### Virginia's Forest Stewardship Management Program

Any private landowner with 20 acres or more in forestland may qualify for Forest Stewardship assistance. With a Forest Stewardship Management Plan, landowners can better manage their forest resource to:

- Improve wildlife habitat
- Enhance natural beauty and land values
- Increase revenue or reduce taxes
- Use Best Management Practices to protect soil and improve water quality
- Increase recreational opportunities
- Protect forests from wildfire, insects, and disease
- Regenerate harvested woodlands and improve stand quality
- Protect wetlands, natural heritage and historic resources

To apply for participation in the Forest Stewardship Program, landowners simply contact their Department of Forestry Area Forester. Based on the landowner's objectives, resource management specialists will evaluate the forestland and prepare a comprehensive written Forest Stewardship Management Plan with recommendations that incorporate the specific needs, objectives, and interests of the landowner.

In these times of tight fiscal restrictions, the Stewardship Program provides an opportunity to stretch our limited resources. The Stewardship Plan provides greater cooperation and coordination among state and federal agencies and the private sector to more effectively manage, protect, and care for natural resources critical to our "common wealth." This avoids duplication of effort, and the landowner is better served.



For more information about the Virginia Forest Stewardship Program, contact the Virginia Department of Forestry, P.O. Box 3758, Charlottesville, VA 22903, phone: 804/977-6555; photo by Tim Wright.

The Virginia Department of Forestry receives approximately \$425,000 annually in 50% matching grant funds from the USDA Forest Service to administer the Virginia Forest Stewardship Program. These grant funds are shared with other agencies and organizations to implement Stewardship projects, to provide technical assistance one-on-one with landowners, develop training for resource specialists, carry out demonstrations, and produce educational materials.

With proven diligence, landowners making substantial accomplishments may be awarded a Stewardship Certification and a special sign to distinguish their land as a Stewardship Forest. As of October 1992, 88 landowners have been certified as Forest Stewards. More than 400 Forest Stewardship Plans have been prepared for forest landowners during the past two years.

To help in implementing conservation practices recommended in Stewardship Management Plans, a companion Stewardship Incentive Program (SIP) has been developed with federal funding. SIP provides cost-share assistance for hardwood management, forest and improvement, recreation enhancement and protection of soil and water resources, wetlands, or threatened and endangered species. For the first time, wildlife habitat improvement practices are also covered.

A Stewardship Forest is more than a place--it's an attitude. A responsibility to practice conservation. Stewardship is an investment in managing both the environmental and economic forest resources for present and future generations of Virginians.

### Virginia Forest Facts "Our Common Wealth"

#### **Forest Resources**

The Sixth Virginia Forest Survey, completed in 1991, revealed that the forestlands of Virginia had experienced many changes during the 6-year period between 1986 and 1992. The survey provided a comprehensive assessment of land-use changes, timber volumes, rates of growth and removal, and insect and disease mortality. Below are some highlights:

- Of Virginia's 24.4 million acres, 15.4 million (61%) are commercially productive woodland. This is down from 63% in 1976.
- Virginia's forests are composed of 66% hardwood, 22% pine and 12% oak-pine mixed.
- 77% of productive forestland (11.9 million acres) is owned by private non-industrial landowners. Forest industry owns 10% (1.5 million acres); government owns 13% (2 million acres).

- Forest growth exceeds harvest by 42%.
- Insect and disease mortality claim 17% of the growth within the growing stock of all species.
- Approximately 180,000 acres are harvested each year, with 95,000 acres replanted to pine. The remaining acreage reseeds naturally to hardwoods or mixed pine and hardwoods.

#### **Economic Value**

An update of the 1985 Economic Study showed that forest industry is a major contributor to Virginia's economy:

- In 1985, forest industry was the number one manufacturing industry in Virginia, worth \$3.8 billion per year to the state's economy.
- One of every seven manufacturing workers, 120,000 wage earners, are employed in a forest-related industry.
- Forest-related industries are located in every county in Virginia, including 360 sawmills, 75 furniture plants, 7 pulp mills, 10 veneer plants and 1000 harvesting contractors.
- Forest resources contribute \$5.2 billion annually to Virginia's economy.
- The forests are also important for hunting, fishing, recreation, providing clean water, purifying the air, and a place to "get away from it all." A monetary value cannot be placed on some of the virtues of the forest. However, it is estimated that some of these attributes are worth another \$1.5 billion to the people of Virginia and its economy.

#### Wildlife and Recreation

Results of the 1985 Wildlife Associated Recreation Survey indicate that more Virginians are engaging in wildlife-related activities. Virginians enjoy the profit from a timber sale, but they also spend many hours in the woods walking, hunting, or taking pictures:

• In 1985, the annual value of statewide forest wildlife recreation

was estimated at \$415 million.

- 82% of Virginians participate in non-consumptive activities, such as observation, photography, and feeding wildlife.
- 29% of Virginians 16 and older participate in hunting or fishing activities.
- Expenditures for travel, equipment, and special membership fees or donations exceed \$200 million per year.
- Hunting for game species dependent on forested habitats generates over \$125 million annually.

### What's Bugging Your Trees?

Do your trees look sad? Bare? Do they have unattractive spots? Many diseases or insects could be bugging them. Three common tree tormentors in Virginia are the gypsy moth, dogwood anthracnose, and chestnut blight. Although the chestnut blight has already taken its toll on our native chestnut trees, there are ways of fighting gypsy moths and dogwood anthracnose. Please call your county forester with the Virginia Department of Forestry for more information.

#### Protect Your Woodland Home From Wildfire

Every year many families lose their homes and possessions to the ravages of wildfire. These losses can be minimized if homeowners take the time and trouble to become aware of safety measures to help protect their homes. By observing the following precautions and procedures, you can reduce the risk of losing your home to wildfire:

- Use fire resistant building materials.
- Burn debris in a safe incinerator.
- Clean roof surfaces and gutters regularly.
- Inspect your chimney at least twice a year.

- Stack your firewood at least 50 feet from your home.
- Install a spark arrestor on your chimney.
- Control vegetation with a fuel break at least 30 feet wide around your home.
- Plan adequate access and escape to your property.
- Have fire tools handy, including: a ladder, 100 feet of pre-connected garden hose, a shovel, a rake, and a bucket.

Check with your local fire department, health department or forestry office for further information on safe burning. Only you can decide if it's worth the effort.

#### **Publications**

The following is a listing of popular publications available through the Virginia Department of Forestry. If you would like any of these publications, please circle your choices or copy them and send them with your address to: Department of Forestry, P.O. Box 3758, Charlottesville, VA 22903.

Note: There is no charge for copies of the following publications:

- · You and the Outdoor Fire Laws
- A Guide to Hardwood Forestry in Virginia
- · Crops, Pastures and Trees
- Forestry and Rural Wildlife
- · Growing Pine for Profit
- Plant White Pine—Make Marginal Land Productive
- Seedling Order Form
- Seedling Care and Planting Instructions
- Stewardship Pamphlet
- Thinning
- Timber Sales
- •The Homeowner and the Gypsy Moth
- Service of the Dept. of Forestry for Private Landowners
- Growing Walnuts...Profit and Pleasure
- White Pine Christmas Trees... an Economic Study
- Protect Your Forest Home From Wildfire

# Preserving in bronze what we're losing in the wild



Bewick's wren by David Turner

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